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Cecil D. Andrus, Governor

March 8, 1993

Mr. Nolan Jensen
WAG-2 Manager
U.S. Department of Energy
Idaho Operations Office
785 DOE Place
Idaho Falls, Idaho 83402

RE: Technical Review Comments for the Draft Treatability Study Report, TRA Warm Waste Pond,
Operable Unit OU 2-10

Dear Mr. Jensen:

The Idaho Department of Health and Welfare, Division of Environmental Quality (IDHW/DEQ) has reviewed the subject treatability study report and the technical review comments are attached. The draft treatability study report was received by IDHW/DEQ on January 20, 1993.

As a result of our review we noticed that the report lacks recommendations based on the results of the study. Although it is unlikely that physical treatment methods by themselves could achieve final action (risk) levels for future residential scenarios (i.e., to within a few pCi/g of cesium for this site), physical separation treatment should be explored to determine the maximum volume reduction to aid in treating other cesium contaminated sediments at the INEL and other DOE facilities.

Please contact me at (208) 334-5860 if you require any clarification of the attached comments.

Sincerely,

R. David Hovland
Remediation Technical Supervisor
Remediation Bureau

RDH/jc

cc: Lisa Green, DOE-ID
Linda Meyer, EPA Region X
Dean Nygard, DEQ/Boise
Clem Potelunas, DEQ/IF

Attachment

TECHNICAL REVIEW COMMENTS
DRAFT TREATABILITY STUDY REPORT
TRA WARM WASTE POND OPERABLE UNIT OU 2-10

Comments

1. The Draft Treatability Study report does a fairly good job showing that the cesium concentrations in the Warm Waste Pond sediment cannot be treated to below the ROD goal of 690 pCi/g in 60 percent of the sediments, except for the acid wash treatment method. IDHW/DEQ is concerned that physical separation treatment methods were not examined in as great a detail as the chemical separation methods in this study. As early information became available on the relatively poor performance of the chemical treatment tests in late July 1992, IDHW/DEQ suggested various physical separation processes (i.e., abrasion studies) needed to be evaluated. It was IDHW/DEQ's position at the time that the physical separation techniques separately and in combination with chemical extraction techniques needed to be tested and evaluated in order to determine the maximum efficiencies that could be achieved to meet the ROD goals in the study. This was not evaluated in the treatability study, thus it remains an important gap in the evaluation of cesium contaminated sediments of this type at INEL and other DOE sites.
2. In reviewing the various acid extraction scenarios, the digestion and/or contact times of up to eight hours are protracted beyond reasonable treatment times for the scale up of a project of this nature (see Volume I, page 4-1). For the anticipated quantity of contaminated soils to be treated (22,000 cubic yards) the time required to treat the soils in the three ponds would be in excess of four years.
3. The generation of additional wastes (i.e., hard to manage waste sludges) through the type of acid dissolution performed on the soil matrix presents an unacceptable waste management problem.
4. The statement on page 6-4, Volume I that "Soil washing cannot be practically applied to the TRA Warm Waste Pond sediments for cesium decontamination" has not been demonstrated fully with respect to the criteria listed in the ROD. It is IDHW/DEQ's position that sufficient physical separation studies as suggested in meetings in July 1992 were not performed. The treatability studies would have benefited from a physical separation standpoint had they been patterned after the paper on "Characterization Protocol for Radioactive Contaminated Soils," published in May 1992 by the U.S. EPA OSWER. This was provided to DOE-ID for consideration by IDHW/DEQ and EPA in August 1992.
5. The section in Volume I: Main report entitled "Conclusions and Recommendations" does not contain any recommendations for further work. Certainly the performance of the aforementioned physical separations/techniques need further work and should be discussed in this section with respect to the potential benefits to other sites at INEL.
6. IDHW/DEQ questions why the NRT Corporation report entitled "Warm Waste Pond Bench-Scale Treatability Study," dated September 1992, was not considered for inclusion in the subject Treatability Study Report.